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ABSTRACT

A questionnaire was sent to presidents of 830 publicly supported two-year colleges that had technical-occupational programs to ascertain if there had been an increase in women students enrolled in 14 programs from the academic year 1971-1972 to the academic year 1972-1973. A total of 40.1% of the schools responded, with 154 schools providing statistical data and 182 selecting a yes-no option. More schools experienced increased enrollments of women in accounting, Management, Computer Technology, Marketing, and Retailing programs and less in Drafting, Electrical-Electronic Technology, Chemical Technology, Engineering, Industrial Supervision, Mechanical Supervision, Mechanical Technology, Transportation, Wholesaling, and Purchasing. Eleven programs showed percentage-wise increases, and three programs showed decreases: Electrical/Electronic Technology, Mechanical Technology, and Transportation. Of five techniques listed as means of attracting women students--increasing number of women faculty, use of pictures of women in publicity, seminars for high school counselors, elimination of male pronouns in publicity, and use of women recruiters for programs--pictures of women was the predominantly used technique. Schools that utilized a majority of the techniques had the predominance of increases. It is concluded from the survey results that: enrollment of women is slight in many of these programs, and is increasing only very gradually. (DB)

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# WOMEN - ARE THE TECHNICAL-OCCUPATIONAL PROGRAMS ATTRACTING THEM?

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Report of Sabbatical Research, Presented December 17, 1973, Cuyahoga Community College

Thank you for coming to hear my report of the research I completed this last year. While I am presenting it orally, I have footnoted it in its written form, and am making available a bibliography. The tables and charts will be projected for your viewing.

The increased economic responsibilities of women have resulted in many new laws intended to give them equal employment opportunities,[1] since the underutilization of the productive potential of women in diversified employment areas is seen as being wasteful and inefficient. Particularly at a time when world competition is forcing a re-assessment of our economic and social tenets, the upgrading of women's employment is a key issue.

Because of the increased cost of living, vast numbers of women are entering or returning to employment, many because they have become heads of their households and are supporting dependents.[2]

If these women are not to form an enormous untrained or wrongly-trained pool of persons who can only compete for the traditional "women's jobs", they must be trained, in large numbers, to enter areas of greater potential. The traditional field of teaching is now overcrowded, and many clerical jobs are giving way to computerization, but many technical-occupational jobs need trained persons to fill them.[3]

Particularly since business and industry are forbidden to discriminate against female applicants,[4] and since holders of Federal contracts must submit affirmative action plans[5] showing increased utilization and upgrading of women employees, a great opportunity exists for placement of trained women in remunerative, non-traditional fields.

The key position of two-year technical-occupational institutions in meeting this situation can hardly be overstated. It is obvious that short training programs are more readily within the reach of disadvantaged women who need to enhance their earning power as rapidly as possible to meet their home obligations. Often the earnings which such women could command in the more traditional "women's occupations" would hardly equal their entitlements under government subsistence programs.[6] Therefore it is to the benefit of society and of the economy that they be trained, as rapidly as possible, to earn adequate

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If the schools offering technical-occupational programs can significantly increase the numbers of women graduating from such programs, they will therefore be performing a

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service critically necessary to the economy,[7] as well as increasing their enrollments at a time of declining registrations.[8]

The extent to which schools which offer certain technical-occupational programs have adapted to this changing employment situation is the object of the survey now being reported upon. As an authorized Sabbatical research project of the Metropolitan Campus, Cuyahoga Community College, in Cleveland, Ohio, and also under the sponsorship of the Women's Equity Action League Educational and Legal Defense Fund, the following questionnaire was sent to the presidents of 830 publicly-supported colleges having technical-occupational programs, since it was felt that the tax-supported schools had a primary responsibility to train all students for their areas of greatest employment potential.

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Has the number of your women students enrolled in the following programs increased from the academic year 1971-72 to the academic year 1972-73? If you cannot give numbers, use yes-no column.

| | (circle answer) | Sept. 1971 | | Sept. 1972 | |
|---|---|---|---|---|---|
| | | Number Men | Number Women | Number Men | Number Women |
| Accounting | Yes No | | | | |
| Management | Yes No | | | | |
| Computer Technology | Yes No | | | | |
| Drafting | Yes No | | | | |
| Electrical-Electronic Technology | Yes No | | | | |
| Chemical Technology | Yes No | | | | |
| Engineering | Yes No | | | | |
| Industrial Supervision | Yes No | | | | |
| Mechanical Technology | Yes No | | | | |
| Transportation | Yes No | | | | |
| Marketing | Yes No | | | | |
| Wholesaling | Yes No | | | | |
| Retailing | Yes No | | | | |
| Purchasing | Yes No | | | | |
| Other_____ | Yes No | | | | |

Has the number of women faculty members teaching in these programs increased during this period? Yes No

Have efforts been made to attract women students to the above programs by:

1. Use of pictures of both female and male students in publicizing the above programs? Yes No

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Has the number of your women students enrolled in the following programs increased from the academic year 1971-72 to the academic year 1972-73? If you cannot give numbers, use yes-no column.

| | (circle answer) | | Sept. 1971 | | Sept. 1972 | |
|---|---|---|---|---|---|---|
| | | | Number Men | Number Women | Number Men | Number Women |
| Accounting | Yes | No | | | | |
| Management | Yes | No | | | | |
| Computer Technology | Yes | No | | | | |
| Drafting | Yes | No | | | | |
| Electrical-Electronic Technology | Yes | No | | | | |
| Chemical Technology | Yes | No | | | | |
| Engineering | Yes | No | | | | |
| Industrial Supervision | Yes | No | | | | |
| Mechanical Technology | Yes | No | | | | |
| Transportation | Yes | No | | | | |
| Marketing | Yes | No | | | | |
| Wholesaling | Yes | No | | | | |
| Retailing | Yes | No | | | | |
| Purchasing | Yes | No | | | | |
| Other_____ | Yes | No | | | | |

Has the number of women faculty members teaching in these programs increased during this period? Yes No

Have efforts been made to attract women students to the above programs by:

1. Use of pictures of both female and male students in publicizing the above programs? Yes No

2. Presentation of seminars or training institutes for high school counselors informing them of opportunities for women students in these programs? Yes No

3. Elimination in recruiting brochures and other publicity of the use of the pronouns "he" and "him", signifying an expectation of male enrolees? Yes No

4. Use of women recruiters? Yes No

It will be seen that fourteen programs were listed. Employment openings are known to exist in these fields, and none involve physical effort beyond the capabilities of the ordinary woman.

A choice of yes-no or documented numerical response was given, since it was felt that some institutions might be inhibited from replying if their numerical data was not readily available.

Out of 830 schools to which questionnaires were sent, 40.1% responded, an extremely high response, evincing great cooperation and interest on the part of the participating institutions. Out of these, 154 furnished statistical data, while 182 selected the yes-no option to state whether the number of women enrolled in the 14 selected programs had increased from the academic year of 1971-72 to the academic year of 1972-73.

The following table shows the combined numerical and yes-no responses received:

| Program | Number of Schools Showing Increase | Schools Showing no Increase |
|---|---|---|
| Accounting | 199 | 74 |
| Management | 123 | 87 |
| Computer Technology | 122 | 93 |
| Drafting | 79 | 138 |
| Electrical-Electronic Technology | 43 | 180 |
| Chemical Technology | 28 | 67 |
| Engineering | 40 | 121 |
| Industrial Supervision | 22 | 68 |
| Mechanical Technology | 31 | 136 |
| Transportation | 11 | 79 |
| Marketing | 94 | 54 |
| Wholesaling | 27 | 30 |
| Retailing | 67 | 44 |
| Purchasing | 21 | 25 |
| Totals | 907 | 1,196 |

It will be noticed that the schools showing no increase in the 14 programs outnumber those which show increases. It is also to be noted that more schools experienced increased enrollments of women in the Accounting, Management, Computer Technology, Marketing and Retailing programs, and less in the remaining, less-traditional programs. It should be noted that many schools remarked that they combined their Marketing, Wholesaling, Retailing and Purchasing programs, and that such combined programs were tabulated under the Marketing heading, so that the increase under this heading may be attributable to women planning to specialize in the retailing aspect of the program, a field which has apparently been more popular with women students than other marketing areas.

It is also to be noted that many schools are experiencing an over-all decline in enrollment, which has affected the numbers of women entering these, and other, programs. The numbers of women enrolled by the 154 institutions submitting enrollment figures are as follows:

| | Numbers of Women Enrolled: | |
|---|---|---|
| Program | September, 1971 | September, 1972 |
| Accounting | 4,006 | 5,374 |
| Management | 1,763 | 2,093 |
| Computer Technology | 3,729 | 3,511 |
| Drafting | 193 | 254 |
| Electrical-Electronic Technology | 244 | 149 |
| Chemical Technology | 215 | 227 |
| Engineering | 156 | 279 |
| Industrial Supervision | 38 | 1,006 * |
| Mechanical Technology | 107 | 73 |
| Transportation | 46 | 31 |
| Marketing | 664 | 794 |
| Wholesaling | 2 | 10 |
| Retailing | 471 | 558 |
| Purchasing | 74 | 84 |
| Totals | 11,708 | 14,443 |

*953 women out of this figure are from a program in one institution

It will be noted that while there is some increase in enrollment by women in these fourteen programs, it is relatively modest, under the circumstances with which we are dealing. It is also noticeable that the enrollment of women has declined in Computer Technology, Electrical-Electronic Technology, Mechanical Technology and Transportation, and that we are confronted with extremely small enrollments in many of the programs, when the number of institutions represented is considered.

The aggregate combined percentages of women enrolled in these programs, as compared to men enrollees, may be more meaningful, in a time of declining registrations, and they are as follows:

| Program | September, 1971 | September, 1972 |
|---|---|---|
| Accounting | 30.6 | 36.6 |
| Management | 15.6 | 18.0 |
| Computer Technology | 31.8 | 34.3 |
| Drafting | 5.4 | 6.8 |
| Electrical-Electronic Technology | 2.9 | 1.6 |
| Chemical Technology | 27.8 | 28.2 |
| Engineering | 2.5 | 5.2 |
| Industrial Supervision | 4.8 | 57.0 * |
| Mechanical Technology | 2.6 | 1.9 |
| Transportation | 10.5 | 4.9 |
| Marketing | 20.1 | 22.6 |
| Wholesaling | 5.0 | 13.9 |
| Retailing | 34.5 | 39.2 |
| Purchasing | 35.4 | 41.0 |

Eleven programs in the reporting institutions, therefore, showed percentage-wise increases and three programs showed decreases: Electrical-Electronic Technology, Mechanical Technology and Transportation.

The percentages in all cases show only rather modest increases, when one considers that employment opportunities in these hitherto-closed fields have suddenly been opened to women. It may be useful, therefore, to examine the results of the lower portion of

the questionnaire, in which were listed five factors which were considered to be valuable in attracting women students:

FIVE TECHNIQUES UTILIZED TO ATTRACT WOMEN STUDENTS

| Technique: | Schools which utilized: | Schools which did not: |
|---|---|---|
| Increasing number of women faculty | 104 | 182 |
| Use of pictures of women in publicity | 244 | 62 |
| Seminars for high school counselors | 171 | 138 |
| Elimination of male pronouns in publicity | 167 | 110 |
| Use of women recruiters for programs | 200 | 107 |

It will be seen that the use of pictures of women was the predominantly-used technique, and it was used by some schools which made no other effort to show women that the programs were open to them. However, an examination of the brochures disclosed that the pictures of women were not such as to make clear that women were eligible in non-traditional programs, and the use of the pictures alone was not found to have resulted in increased enrollments of women.

A tabulation of the schools which submitted answers to this part of the questionnaire disclosed that 184 gave a majority of "yes" answers, and 87 gave a majority of "no" answers. These schools were then ranged in a spectrum from those showing no increases of women in any program offered, to increases of women in all programs offered. The correlation with the use of the five enumerated techniques for attracting women was positive, and displayed few exceptions. The schools which utilized a majority of the techniques for attracting women students had the predominance of increases. The over-all total increase, and the percentage increases, were attributable to their efforts.

For example, the three schools which listed all five answers as "No" and had made no efforts to attract women, had no increased percentages of women in any of the programs which they offered.

On the other hand, twelve schools had indicated "yes" answers to all five techniques for attracting women, and they showed percentage increases of women enrolled in nearly all the programs they offered. Five of these schools, in fact, showed percentage increases of women in all programs they offered.

From a fair sampling of the two-year, tax-supported institutions offering technical-occupational programs, then, the results are as follows: Enrollment of women is still slight in many of these programs, and is increasing only very gradually, either numerically or percentage-wise as compared to male enrollment. Some institutions have made a certain amount of effort to attract women students to these programs with only modest success. However those institutions which have made considerable efforts have rather uniformly been able to increase their enrollments of women in the fourteen programs herein surveyed.

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Footnotes:

1. Title VII, Civil Rights Act of 1964, Public Law 88-352, July 2, 1964
   Equal Employment Opportunity Act of 1972, Public Law 92-261, March 24, 1972

2. Underutilization of Women Workers, Women's Bureau, U. S. Department of Labor, 1971 (revised)
   Equal Pay in the United States, Morag MacLeod Simchak, International Labour Review, Vol. 103, No. 6, June, 1971

3. Occupational Outlook Handbook, Bureau of Labor Statistics, U. S. Department of Labor, 1972
   Trends in Employment of College and University Graduates in Business and Industry by Frank S. Endicott, Northwestern University, Evanston, Illinois, 1972

4. Sex Discrimination and Contract Compliance, A.C.E. Special Report, American Council on Education, One Dupont Circle, Washington, D. C. 20036, 1972

5. Part 60-2, Affirmative Action Programs, Title 41, Public Contracts and Property Management, Office of Federal Contract Compliance, Equal Employment Opportunity, Department of Labor, December 4, 1971
   Executive Order 11246 as amended by 11375, Implementing Regulations and Guidelines
   Equal Pay Act of 1963 as amended by the Education Amendments Act of 1972
   Title IX of the Education Amendments Act of 1972

6. "Fact Sheet on the American Family in Poverty", Women's Bureau, U. S. Department of Labor, Employment standards Administration 1971 (rev.)
   "The Myth and the Reality", ibid, April, 1971
   Women Workers Today, ibid., 1971 (rev.)
   "Road Maps of Industry", the Conference Board, 845 Third Avenue, N. Y., citing Census Department figures, No's. 1703 and 1704

7. "Plans for Widening Women's Educational Opportunities", Women's Bureau, Labor Dept. Speech of Elizabeth Duncan Koontz, March 13, 1972
   "American Women's Participation in Higher Education", speech by Alan Pifer President, Carnegie Corporation of New York, November 29, 1972

8. A large number of responding schools either exhibited or mentioned declining enrollments.

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